

TRADE REPORTS FROM THE NYS HORT SHOW 2000

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by Linda McCandless

ROCHESTER, NY: Faced with a glut of apples on the market worldwide, the mood of apple growers at the New York State Horticultural Society's 145th Annual Meeting and Trade Show held January 12 and 13 in Rochester, NY, was somewhat glum. Some talked about getting out of the business. More optimistic growers are looking to diversify by adding stone fruits or value-added products.

About 250 people attended the show. The leadership of the Hort Society is actively looking for alternative sites or partners for next year's show.

The trade show ran for one day, from 3-7 p.m., with about 30 exhibitors participating. A social hour held at the same time was a new and welcome addition to the schedule. The format is similar to the one used at the Hudson Valley fruit school.

In the darkened educational rooms, Northeast fruit growers attending the Lake Ontario Tree Fruit School listened attentively as Cornell University extension educators (CCE) and researchers reported trials, tribulations, and successes in last season's test plots. The following are some of the take-home messages on plant protection, cultural practices, and fruit handling from Cornell.

HORTICULTURAL PRACTICES

Lailiang Cheng, assistant professor in Fruit and Vegetable Science at Cornell in Ithaca, reported that the growth potential of apple nursery plants is mainly determined by reserve nitrogen and is not limited by reserve carbohydrates. "Combining optimum nitrogen fertilization during the growing season with foliar urea application after terminal budset in the fall is an effective way to improve reserve nitrogen status and growth performance of apple nursery trees," she said.

Steve Hoying, of the Lake Ontario Fruit Team, and one of the organizers of the Tree Fruit School, reported on "Getting New Orchards Off to a Good Start," noting that getting trees growing and producing quickly is more important today than ever before. "Growers must pay

particular attention to site selection and preparation, tree quality, cultural care, and especially pest control in the establishment years."

[Jim Schupp](#), of the [Hudson Valley Lab](#), talked about chemical thinning on Macoun and Honeycrisp. "Petal Fall timing for chemical thinning sprays is critical to success when thinning Macoun apples," he said. Accel at 53 oz. per 100 gallons plus 1 pt. per 100 Sevin XLR followed by a second spray of Accel alone four or five days later provides adequate thinning. Accel resulted in larger, firmer fruit than NAA and was less likely to over-thin Macoun trees. Honeycrisp is easy to thin at the traditional 10-12 mm fruit diameter timing. NAA at 2.5 or 5 ppm produced adequate thinning and increased fruit size compared to controls. "Growing quality Honeycrisp presents many challenges, but chemical thinning isn't one of them," said Schupp.

DISEASE MANAGEMENT

[Dave Rosenberger](#), Cornell plant pathologist at the Hudson Valley Lab, presented research results on two new apple fungicides, Sovran and Flint, that should be available in the next growing season for managing apple scab, powdery mildew, black rot, sooty blotch, and flyspeck diseases. He advised growers on the most cost-effective way to use these new products, warning that, "misuse could lead to rapid development of fungicide-resistance."

INSECT MANAGEMENT

David Kain, entomologist at the NYSAES, reported that populations of the American plum borer have been building up in western New York tart cherry orchards for the past 20 years, or so, because shaker damage has allowed them entry. "They are the prevalent borer in that crop, contributing to about a 33 percent decrease in the lives of the trees," he said. The American plum borer is also important in peaches with cankers. "We are now finding them moving out of tart cherry trees and into dwarf apple trees through burrknots," said Kain.

[Art Agnello](#), entomologist at the NYSAES, reported how cover spray choices affect mite management. "Under moderate European red mite pressure, the respective effectiveness of control programs using prebloom oil, Apollo, or postbloom Agri-Mek was not affected by the use of pyrethroids vs. organophosphates during the rest of the season," said Agnello. He went on to report, that, after two years of these trials, there has been only marginal evidence that a seasonal Asana program will flare mites, and only at higher population pressures, so it should be possible to use a pyrethroid season-long in combination with any effective mite management program, provided that acaricides are rotated and mite levels are monitored on a timely basis. Pyrethroids were, however, associated with outbreaks of apple rust mite in some cases, particularly in the Hudson Valley.

Deborah Breth, of the Lake Ontario Fruit Team, reported on the challenges in controlling Oriental Fruit moth. "Oriental Fruit moth populations and related damage have been increasing in peach and apple orchards over the last few years," she said. Some orchards are seeing more shoot and fruit infestation after replacing broad-spectrum insecticides with more specific insecticides to control other pests. "In two orchards we have detected the development of resistance to organophosphates and carbamates with 30-35% resistance."

Alternative control programs will be tested in western New York this season using pheromones to disrupt mating in combination with different insecticide applications to find the best strategy for control.

THE REGULATORY CHALLENGE

New York apple growers are quite concerned about the future potential loss of an important class of insecticides currently widely used in New York orchards, the organophosphates. "Recent long-term studies were initiated in commercial orchards to determine if the obliquebanded leafroller and the rest of the insect and mite pest complex could be controlled by using new 'reduced risk' pesticides and no organophosphates," said [Harvey Reissig](#), professor of entomology at the NYSAES. "Control of the entire insect and mite pest complex in the research blocks was comparable to that in the grower's standard program. Studies will be continued in these plots for at least two more years to determine if these programs can provide long-term sustainable control," he said. Also, the cost and economic returns to the growers will be calculated for these new "reduced risk" pesticide programs and compared to that in the standard programs.

ALTERNATIVE CROPS

Growing grapes may be a viable option for apple growers who have equipment that is adaptable to grape production, according to Tim Martinson, who is with the Finger Lakes Grape Program in Penn Yan. Grapes have many uses, including bulk juice and wine, premium wine, and table grapes, but before you start, it is important to consider markets, production costs and returns, and site selection. "The most important limiting factors for site selection are winter low temperatures and soil depth," says Martinson. Sites west of Rochester along the escarpment may be best for cold-tender varieties, including premium vinifera grapes.

"The development of industrialized production and global sourcing has changed the marketing structure of the horticulture industry dramatically," according to Wen-fei Uva, who is a senior research associate in the department of agricultural resource and managerial economics (ARME), at Cornell, in Ithaca. "Exploiting niche and value-added markets are important for the viability of the Northeast horticulture industry," she said. "Knowing where the market is for your crop, and planning your marketing strategies before you plant are the keys to success."

INTEGRATED PEST MANAGEMENT

Mike Hoffmann, the new director of the [NYS Integrated Pest Management Program](#), provided a vision of the organization for 2000 and beyond. "For many years, the NYS IPM Program personnel, along with a large contingent of faculty and Extension staff at Cornell, have been helping develop and deliver cost-effective and environmentally safe pest management tactics for ornamentals, dairy and field crops, fruit, and vegetables," he said. "With a recent increase in state funding for Community IPM, we are also offered the

opportunity to develop and deliver IPM for the non-agricultural sector."

Hoffmann's vision is to see the IPM Program enhanced and enlarged so that it may contribute even more to the well being of the citizens of New York. In some pest-crop situations in agriculture, he believes IPM may have reached a point of limited return for short-term investments in research and implementation.

"To make major strides in these situations, IPM needs to invest in more long-term and fundamental research that involves crop protection and production disciplines: plant breeding (including biotechnology), applied ecology (understanding how the systems work), classical biological control (stabilizing pest problems with new natural enemies), long-term crop rotation studies, and whole farm system studies," he said. "We also need to incorporate additional crop management components, in particular those related to environmental issues."

Hoffmann was also optimistic about the future of digital diagnostics. With this technology, a photo of a pest (disease, weed, insect) is taken with a digital camera and the image is sent electronically to a diagnostician, who identifies the pest. "This technology will not work in all cases, but could reduce costs and result in timely diagnoses of pest problems," said Hoffmann.

He also envisions an expanded stakeholder base that will include consumer advocacy groups like the Audubon Society, the Nature Conservancy and others.

FRUIT PROCESSING

Robert Gravani, professor of food science at Cornell University on the Ithaca campus, reported on reducing the microbial risks in fruits and vegetables. "Since 1987, there has been an increase in the number of produce-associated foodborne outbreaks that have involved a variety of fruits and vegetables," he said. In response to these statistics, several large food retailers have informed their produce suppliers that growers must have a certified plan for their farms that focuses on reducing microbial risks if they want to continue supplying fruits and vegetables.

To reduce the microbial risks in fruits and vegetables, growers need to use good agricultural practices and address key areas including water and manure use, farm worker hygiene, field transportation, and packing house sanitation. More information on reducing microbial risks in fruits and vegetables can be obtained by contacting: The NE Good Agricultural Practices Program, Department of Food Science, 11 Stocking Hall, Cornell University, Ithaca, NY 14853.

[Randy Worobo](#) assistant professor of food microbiology at the NYSAES updated the crows on the approval of new cider pasteurization technologies. "Besides pasteurization for apple cider, ultraviolet light has now been approved for use by NYS Ag & Markets. Preliminary research into sulfur dioxide and dimethyl dicarbonate indicates a good potential for achieving a 5-log reduction of E. coli O157:H7 in apple cider."

There was standing room only for Bob Kime and Tracy Harris' talk about growers, entrepreneurs and companies being able to use the [Fruit and Vegetable Processing Pilot Plant](#) at the NYSAES in Geneva for developing or improving food products or making small scale production trials. Attendees stayed for over an hour asking questions and tasting fruit wines, raspberry cider, and varietal dried apple slices including the white, non-oxidizing slices from Geneva's newest, but as of yet unnamed apple, NY674.

"One large grower commented that this was the only optimistic talk he had heard about the industry all day," said Kime, who manages the Pilot Plant in Geneva. "The main point we stressed was that existing fruit products drastically need improving, as shown by samples of poor quality dried slices and fresh fruit-flavored cider, if New York growers and processors were going to go head to head with competition from as far away as China and Argentina."

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